Restaurant Recommender

Group Members:

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Our tool/project aims at providing relevant restaurants to user on the basis of the query user inserts or provides user with a ranked list of restaurants in case user doesn't enter a query. The basic idea is to find the most relevant user reviews (reviews by other users) which are similar to the entered query by current user and then respond with the restaurants associated to the most relevant queries. The relevance would be calculated on the basis of similarity with the other reviews, rating of the review and we may include some other parameters from the dataset that we have. We plan on using https://www.kaggle.com/himanshupoddar/zomato-bangalore-restaurants/downloads/zomato-bangalore-restaurants.zip/1

What is the function of the tool?

The tool aims at providing the best restaurant results to user on the basis of either the query they enter or provide them the list of restaurants on the basis of their past reviews.
An example of the query is "ambience". Suppose a user searches this query, then a list of restaurants is returned. These restaurants have good ambience in their reviews. Other example could be "live football streaming" and user would be provided a list of restaurants with the same.

Who will benefit from such a tool?

People who are traveling to new places or are looking for restaurants suggestions on the basis of their query or on the basis of their past preferences/reviews.

Does this kind of tools already exist? If similar tools exist, how is your tool different from them? Would people care about the difference?

There are similar tools that exist but majority of them don't utilize user reviews to fetch the results. If we can include user reviews it can provide user with the customized results to their query rather than choosing from predefined filters.

What existing resources can you use?

We will be using dataset https://www.kaggle.com/himanshupoddar/zomato-bangalore-restaurants/downloads/zomato-bangalore-restaurants.zip/1 . We will be using standard tools/libraries taught in the course and some other standard open source libraries that we may encounter while actually working on the project.
We may use https://developers.zomato.com/documentation#/

What techniques/algorithms will you use to develop the tool?

We will be initially using information retrieval techniques taught in the course to fetch the relevant information that we need from all the reviews and other meta data related to review. Additionally, we may use a supervised learning model /classifier to classify the reviews as valid or not. It can happen that the top reviews fetched by our information retrieval model may not be useful and hence we would classify the top fetched reviews into two classes valid and not valid. We can then find the restaurant corresponding to the positively classified reviews. We may change our approach to get better results but this is the basic pipeline we will be following.

How will you demonstrate the usefulness of your tool.
User will be asked to enter a query and we will respond with the top results for that query. We may use a command line application to demonstrate and if the time permits we may use a GUI.

A very rough timeline to show when you expect to finish what. (The timeline doesn't have to be accurate.)

Requirement Analysis & Data gathering: 1 week
Development: 3 weeks
Testing: 1 week
Documentation: 1 week
Presentation: 1 week